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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No. : 10/769,344
Inventor(s) : Steven Daryl Smith et al.
Filed : January 30, 2004
Art Unit : 1713
Examiner : Peter D. Mulcahy
Docket No. : 9005MR
Confirmation No. : 8322
Customer No. : 27752
Title : Thermoplastic Elastomer Compositions Containing A
Phase Change Solvent And Selected Processing Oils

APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Dear Sir,

This is Appellant's Brief relating to an appeal of the May 3, 2006 Final Rejection in the above-identified Application. The Notice of Appeal was deposited with a Certificate of Facsimile transmission and addressed to Commissioner for Patents, Alexandria, VA 22313-1450 on August 3, 2006, and was noted as received by the USPTO (hereinafter referred to as the "Office") on the same day.

The time for filing the Appeal Brief is extended by one month, pursuant to the fee charged to the Assignee's Deposit Account in the papers submitted herewith. Attached hereto is a Petition for a 2-Month Extension of Time, and the fee required under 37 CFR §1.17(a), providing for a timely response up to and including December 4, 2006 (December 3, 2006 falls on a Sunday).

REAL PARTY IN INTEREST

The real party in interest is The Procter & Gamble Company of Cincinnati, Ohio.

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RELATED APPEALS AND INTERFERENCES

Three pending appeals are related to the present one, and include those for U.S. Patent Application Numbers (Attorney Docket Numbers): 10/429,432 (9004); 10/429,531 (9005M); and 10/936,938 (9006MR).

STATUS OF CLAIMS

Claims 1-20 are pending contrary to the statement in the Final Office Action (mailed on May 3, 2006), which errantly indicates that Claims 1-17 are pending. Claims 1-17 stand finally rejected.

The final rejection of claims 1-17 is being appealed. A complete copy of the appealed claims is set forth in the *Claims Appendix* attached herewith.

STATUS OF AMENDMENTS

No amendments to the instant claims have been filed by Appellant subsequent to the appealed-from Final Office Action (mailed on May 3, 2006). Moreover, no amendments to the instant claims have been filed after receipt of the subsequent Advisory Action (mailed on July 24, 2006).

SUMMARY OF CLAIMED SUBJECT MATTER

Claim 1 is directed to a composition comprising: (a) from about 1 to about 98 weight percent (wt %) of a thermoplastic elastomer, which is a block copolymer having at least one soft block and at least one hard block; (b) from about 1 to about 70 wt % of a phase change solvent which has a phase change in a temperature range from about 40°C to about 250°C; and (c) from about 1 to about 70 wt% of a processing oil producing a glass transition temperature of greater than about 85°C for a polystyrene homopolymer. *Please reference the Specification at: page 4, lines 10-33.*

The phase change solvent and processing oil may be blended with the thermoplastic elastomer (hereinafter "TPE") to "...produce elastomeric compositions that exhibit lowered viscosity and lowered processing temperature without substantially compromising the mechanical properties" of the TPE. *Please reference the Specification at: page 1, lines 14-19; and the Abstract.* "It is well known that plasticizers, viscosity modifiers and processing oils may be used to lower the viscosity and improve the melt

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processability of TPE's or mixtures. However, due to their low molecular weight and their softness and/or fluidity down to room temperature, these agents tend to reduce the mechanical properties of the TPE's and blends. In contrast, the [presently claimed] phase change solvents are solid-like at or below body temperature, thus, they may function like reinforcing particles (i.e., fillers) in the TPE's and blends. Moreover, the phase change solvents, due to their chemical formula and molecular weights, may be intimately mixed the TPE's and function like compatibilizers. When they solidify, they may be fairly homogeneously dispersed throughout the TPE matrix. " *Please reference the Specification at: page 2, lines 8-19.*

The claimed phase change solvents have a general formula selected from the following list:

- (I) $R' - P_y - (Q - P_x)_n - Q - P_y - R$;
- (II) $R' - P_y - (Q - P_x)_n - R$;
- (III) $R' - (Q - P_x)_n - R$;
- (IV) $R' - (Q - P_x)_{n-1} - Q - P_y - R$;
- (V) $R' - (Q - P_x)_n - Q - R$;

In some embodiments, there may be a mixture of phase change solvents having different general formulas selected from the list. *Please reference the specification at page 4, line 15-21.*

The letters in the phase change solvent formulas represent the following entities: Q is a substituted or unsubstituted difunctional aromatic moiety; P is CH₂; R and R' are the same or different and are independently selected from H, CH₃, COOH, CONHR₁, CONR₁R₂, NHR₃, NR₃R₄, hydroxy, or C1-C30 alkoxy; R₁, R₂, R₃ and R₄ are the same or different and are independently selected from H or linear or branched alkyl from C1-C30; x is an integer from 1 to 30; y is an integer from 1 to 30; and n is an integer from 3 to 7. *Please reference the specification at: page 4, lines 22-28; and claims 1 and 14 as amended in the Amendment After First Office Action (faxed on February 16, 2006).*

Claim 14 is directed to a composition comprising all of the elements of claim 1, with two additional elements. First, the amount of thermoplastic elastomer of use in the

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composition in claim 14 is "from about 1 to about 99 wt%" rather than "from about 1 to about 98 wt%" disclosed in claim 1. Second, the "from about 1 to about 70 wt% of processing oil" of claim 1 is additionally described in claim 14 as "...comprising a synthetic oil and a natural oil..." *Please reference part "c" of claim 14, and the specification at page 6, lines 13-14 and, 17-19.*

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-17 stand rejected under 35 USC § 103(a) as being unpatentable over US Patent No. 2,075,107, issued to Frazier (hereinafter referred to as "Frazier") in view of US Patent No. 5,389,711, issued to Westbrook et al. (hereinafter referred to as "Westbrook").

ARGUMENTS

The appealed-from Final Office Action has failed to establish a *prima facie* case supporting the rejection of claims 1-17 as being obvious over Frazier in view of Westbrook.

Appellants concurrently address the merits of the aforementioned obviousness rejection as it applies to independent claims 1 and 14 and the balance of the rejected claims, which either directly or indirectly depend therefrom.

According to MPEP § 2143.03, and the case law cited thereunder, "[t]o establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). Appellants assert that, contrary to what is alleged in the Final Office Action, Frazier in view of Westbrook does not in fact teach or suggest all of the claim limitations of independent claims 1 or 14, or of dependent claims 2-13 and 15-17. This assertion is made on the bases that the cited references do not teach or suggest: (I) the use of processing oil or processing oil compositions producing a glass transition temperature of greater than about 85°C for a polystyrene homopolymer; and (II) solvents having a phase change in the temperature range of from about 40°C to about 250°C.

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I. Frazier in view of Westbrook does not teach or suggest processing oil or processing oil compositions producing a glass transition temperature of greater than about 85°C for a polystyrene homopolymer.

Although the Office is silent on the matter, Appellants respectfully submit that neither Westbrook nor Frazier teach or suggest the use of processing oils or processing oil compositions with the specific glass transition temperature that is required *inter alia* in claims 1 and 14, and the balance of the rejected claims which depend therefrom. As such Appellants respectfully submit that the references do not form the basis for a *prima facie* obviousness rejection per MPEP § 2143.03 and the case law cited thereunder.

II. Frazier in view of Westbrook do not teach or suggest solvents having a phase change in the temperature range of from about 40°C to about 250°C

According to independent claims 1 and 14, the phase change solvents with the formulas described therein, *must* be characterized by a phase change in the temperature range of from about 40°C to about 250°C. Thus "...the phase change solvents are solid-like at or below body temperature." *Please reference the specification at: p. 2, lines 11-13.* Appellants assert that one of skill in the art would recognize that the ester compounds disclosed by Frazier as plasticizers would be liquid at room temperature and as such would not be characterized by the phase change in the temperature range from about 40°C to about 250°C that is required *inter alia* in independent claims 1 and 14. Indeed, beyond statements and implications in Frazier that disclosed esters are liquid or have characteristics of liquid (see: page 1, col. 1, lines 22-26; page 2, col. 1, lines 14-17 and lines 67-73; and page 2, col. 2, lines 37-44), two further sources provide evidence that the Frazier compounds are liquid in the claimed phase change temperature range. The two sources are: (a) the Office and (b) literature in the art.

(a) The Office admits that Frazier teaches liquid compounds

As noted by Appellants in the After Final Response (faxed July 3, 2006), the Office characterized the compounds of Frazier in the Interview Summary (dated February 2, 2006) for co-pending US Patent Application Number 10/429,531 (Attorney Docket

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Number 9005M), which is also currently under appeal. A copy of the Interview Summary is attached herewith as *Exhibit 1* in the *Evidence* section, *infra*.

In the Interview Summary, the Office clearly states that "[t]he compounds of Frazier are different from those claimed in the *ortho*-ring attachment of the pendant groups. This attachment renders liquid compounds."

(b) Literature indicate that *ortho*-ring substituted phthalates are liquids

As noted by Appellants in the After Final Response, the Office Action mailed on November 18, 2005 regarding co-pending case 10/429,531 (Docket No. 9005M) states the following. "The Frazier patent teaches ester compounds which...conform to the general formula at page 1, lines 28-33" in which it is taught that R and R¹ may be alkyl or aryl groups having at least two carboxyl groups attached thereto. *Please reference Frazier on page 1, lines 26-37.* Appellants assert that one of skill in art would recognize that the substitution of an alkyl or aryl group at the R and/or R¹ position(s) of Frazier provides for phthalate groups that are *ortho*-ring substituted, i.e., substituted in the 1,2 position. For instance, by substituting aryl groups into R and R¹ positions, compounds comprising Frazier's examples are derived, including: ethylene glycol dihydrogen diphthalate on page 1, line 45; di-beta-butoxy ethyl ethylene glycol diphthalate on page 2, line 20; di-beta-ethoxyethyl dethylene glycol diphthalate on page 2, line 35; dibutyl ethylene glycol diphthalate on page 2, line 45; and the mixed ester on page 2, line 55, *all* of which comprise diphthalates which are *ortho*-ring (1,2) substituted.

It is well recognized in the art that the phase change behavior of a phthalate is dependent upon where the ring is substituted as well as the size of the substituting group. This assertion is supported by the following table summarizing the melting points of phthalates disclosed in the art, which was previously submitted to the Office in the After Final Response (faxed July 3, 2006), and in the Office Action Response (faxed February 23, 2006) for co-pending Application No. 10/429,531 (Docket No. 9005M).

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R group	phthalate melting point Ortho ring subst. 1,2-	terephthalate melting point Para ring subst. 1,4-	trisubstituted ring melting point
Methyl	2°C (Ref. 1 Reg. 131-11-3)		
Ethyl	-3°C (Ref. 1 Reg. 84-66-2)	44°C (Ref. 2 Reg. 636-09-9)	
Butyl	-35°C (Ref. 1 Reg. 84-74-2)		liquid (Ref. 2 Reg. 104564-69-4)
Hexyl	-58°C (Ref. 2 Reg. 84-75-3)	37°C (Ref. 2 Reg. 1818-96-8)	liquid (Ref. 2 Reg. 79307-88-3)
Octyl	-50°C (Ref. 1 Reg. 117-84-0)	48°C (Ref. 2 Reg. 4654-26-6)	liquid (Ref. 2 Reg. 123905-83-9)
Decyl	Liquid (Ref. 2 Reg. 84-77-5)	57°C (Ref. 2 Reg. 1818-97-9)	liquid (Ref. 2 Reg. 122240-20-4)

Ref. 1- Aldrich Chemical Company Catalog (2005-6)

Ref. 2- SciFinder search of CAPLUS, MEDLINE, CASREACT and CHEMLIST, CHEMCATS databases.

Referencing the table, it is readily apparent that phthalates like those taught by Frazier that are *ortho*-ring (1,2) substituted are liquids at room temperature and will not undergo a phase change in the temperature range from about 40°C to about 250°C. In contrast, it is also readily apparent that phthalates that are *para*-ring substituted, i.e., 1,4-substituted phthalates, such as those presently claimed are solid at room temperature and will undergo a phase change in the temperature range from about 40°C to about 250°C as is required in the rejected claims.

As noted by the Office in the Advisory Action (mailed July 24, 2006), the present claims are not limited to *para*-ring (1,4) substituted compounds. However, Appellants respectfully submit that the present limitation in the rejected claims of a "phase change in a temperature range from about 40°C to about 250°C" clearly excludes the *ortho*-ring (1,2) substituted phthalates of Frazier, which, as established above, are liquids in the claimed phase change temperature range. Consequently further amendment of the

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rejected claims to include only *para*-ring (1,4) substituted phase change solvents it is not necessary to overcome the obviousness rejections over Frazier.

Appellants now address the propriety of the assertion made by the Office in the Advisory Action (mailed July 24, 2006) that "Frazier suggests the use of "aryl" and "oxaryl" constituents as the R3 and R4 [of its disclosed phthalates and that t]he selection of these substituents would render higher molecular weight compounds. These compounds are presumed to have the phase change temperature as claimed." *Please reference the Advisory Action at page 2.* Appellants respectfully submit that the Office's presumption is without basis. First there is no teaching or suggestion in Frazier that this would be a desirable substitution, much less one that would be useful to increase the phase change temperature of its disclosed phthalates. Second, regardless of what constituents are chosen for the R3 and R4 of the Frazier compounds, the resulting phthalates will still be *ortho*-ring (1,2) substituted at the R and R' positions. As noted above, the location of substitution impacts the phase change behavior of a phthalate as well as the size of the substituting group. Thus no clear basis has been established to support the presumption by the Office that "higher molecular weight" compounds of Frazier have phase changes in the claimed phase change temperature range.

Based upon the foregoing, Appellants respectfully submit that Frazier does not teach or suggest phase change solvents having a phase change in the temperature range from about 40°C to about 250°C as is required claims 1 and 14 or claims 2-13 and 15-17, which respectively depend therefrom. Since Appellants have established that the primary reference of Frazer is not properly applied in the suggested context, Appellants believe that there is no need to address the propriety of the application of Westbrook as a secondary reference. Nevertheless, Appellants note that Westbrook fails to resolve any of the shortcomings of Frazier as follows.

The Office cites Westbrook as showing "...similar ester compounds mixed with the claimed polymers..." and that "[i]t would be obvious to use the ester compounds of Frazier with the polymers of Westbrook given the overlap in suitable materials to be used in each of the compositions." *Please reference the Final Office Action at page 2, paragraph 4.* Appellants respectfully disagree with the characterization of what is shown by Westbrook and assert that Westbrook does not indeed teach or suggest the claimed polymers and actually teaches away from using the presently claimed polymers.

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Contrary to what is asserted by the Office, the presently claimed phase change solvents do not overlap in scope with the polymers of Westbrook. Westbrook teaches the use of "ionomers" or functionalized monovinyl aromatic polymers in which salt functional groups are incorporated "...into the polystyrene blocks to increase the polymer's solvent resistance, high temperature properties and tensile strength." *Please reference Westbrook at col. 1, lines 50-64.* Westbrook then indicates that "[t]he same polymer without functionality is limited to service temperatures of about 100 °C." *Please reference Westbrook at col. 1, lines 62-64.* Yet, the presently claimed phase change solvents are not "functionalized" polymers, i.e., they do not comprise salt functional groups, and contrary to Westbrook's teaching, they do not have the service temperature limitations as is evidenced by the claimed phase change temperature range of from about 40°C to about 250°C. Moreover, ionomers such as those disclosed by Westbrook as a class require an extremely polar additive such as water to dissociate the ionic groups and lower viscosity. *Please reference Westbrook at col. 1, through col. 2.* Conversely, phase change solvents such as those currently claimed are not plasticized by extremely polar compounds such as water which may disadvantageously act as a non-solvent. Thus based upon Westbrook one of skill in the art would be led away from using the present phase change solvents which need not be functionalized for suitable "service temperatures" and that do not require an extremely polar additive such as water for dissociation.


Based upon the foregoing, Appellants submit that Frazier in view of Westbrook does not teach or suggest all of the limitations of claims 1 and 14 or of claims 2-13 and 15-17 which respectively depend therefrom, and as such cannot render them obvious per MPEP § 2143.03, and the case law cited thereunder. Consequently, the withdrawal of the § 103(a) rejections of claims 1-17 is respectfully requested.

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SUMMARY

Appellants respectfully submit that claims 1-17 were not properly rejected under 35 U.S.C. § 103 in the Final Office Action. In light of the analysis and discussion presented above, Appellants respectfully request that the Honorable Board of Patent Appeals and Interferences reverse the rejections of Claims 1-17, and remand the application with instructions that the claims be allowed over the cited art.

Respectfully submitted,
THE PROCTER & GAMBLE COMPANY



Signature
Julie A. McConihay

Typed or printed name
Registration No. 55,439
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November 28, 2006

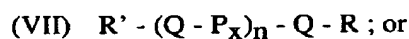
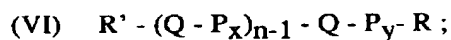
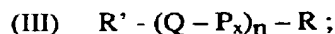
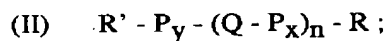
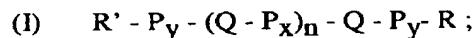
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CLAIMS APPENDIX

1. (Rejected) A composition comprising:

- a) from about 1 to about 98 wt% a thermoplastic elastomer, which is a block copolymer having at least one soft block and at least one hard block;
- b) from about 1 to about 70 wt% a phase change solvent having the general formula:



a mixture thereof;

wherein Q is a substituted or unsubstituted difunctional aromatic moiety; P is CH₂; R and R' are the same or different and are independently selected from H, CH₃, COOH, CONHR₁, CONR₁R₂, NHR₃, NR₃R₄, hydroxy, or C1-C30 alkoxy; wherein R₁, R₂, R₃ and R₄ are the same or different and are independently selected from H or linear or branched alkyl from C1-C30; x is an integer from 1 to 30; y is an integer from 1 to 30; and n is an integer from 3 to 7; and

- c) from about 1 to about 70 wt% of a processing oil producing a glass transition temperature of greater than about 85°C for a polystyrene homopolymer;

wherein the phase change solvent has a phase change in a temperature range from about 40°C to about 250°C.

2. (Rejected) The composition of Claim 1 wherein the processing oil producing a glass transition temperature of greater than about 87°C for a polystyrene homopolymer.

3. (Rejected) The composition of Claim 1 wherein the processing oil producing a glass transition temperature of greater than about 90°C for a polystyrene homopolymer.

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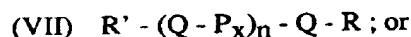
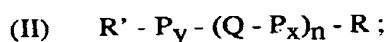
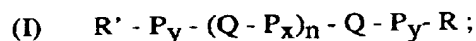
4. (Rejected) The composition of Claim 1 wherein the processing oil is selected from the group consisting of poly (alpha olefins),olefinic oligomers, mineral oils, paraffinic oils, isoparaffinic oils, naphthenic oils, petrolatum, waxes, or mixtures thereof.
5. (Rejected) The composition of Claim 1 wherein the synthetic processing oil is a poly (alpha olefin).
6. (Rejected) The composition of claim 5 wherein the poly(alpha olefin) is selected from the group consisting of polydodecenes, polydecenes, polyoctenes, polybutylenes, polybutenes, and mixtures thereof.
7. (Rejected) The composition of claim 5 wherein the poly(alpha olefin) is selected from the group consisting of poly(1-decene), poly(1-dodecene), poly(1-octene), and mixtures thereof.
8. (Rejected) The composition of Claim 1 wherein the processing oil is a mixture of a synthetic oil and a natural oil.
9. (Rejected) The composition of Claim 8 wherein the synthetic oil comprises at least about 40% of the processing oil mixture.
10. (Rejected) The composition of Claim 1 wherein the processing oil has a molecular weight in the range of from about 500 to about 3000 g/mol.
11. (Rejected) The composition of Claim 1 additionally comprising from about 0.1 to about 50 wt% a nucleating agent.
12. (Rejected) The composition of Claim 1 additionally comprising from about 1 to about 50 wt% a thermoplastic polymer.

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13. (Rejected) The composition of Claim 1 wherein the composition has a shear viscosity of about 0.1 to about 3000 Pa·s at 190°C and 1 sec⁻¹.

14. (Rejected) A composition comprising:

- a) from about 1 to about 99 wt% a thermoplastic elastomer, which is a block copolymer having at least one soft block and at least one hard block;
- b) from about 1 to about 70 wt% a phase change solvent having the general formula:



a mixture thereof;

wherein Q is a substituted or unsubstituted difunctional aromatic moiety; P is CH₂; R and R' are the same or different and are independently selected from H, CH₃, COOH, CONHR₁, CONR₁R₂, NHR₃, NR₃R₄, hydroxy, or C1-C30 alkoxy; wherein R₁, R₂, R₃ and R₄ are the same or different and are independently selected from H or linear or branched alkyl from C1-C30; x is an integer from 1 to 30; y is an integer from 1 to 30; and n is an integer from 3 to 7; and

- c) from about 1 to about 70 wt% of a processing oil composition comprising a synthetic oil and a natural oil and producing a glass transition temperature of greater than about 85°C for a polystyrene homopolymer;

wherein the phase change solvent has a phase change in a temperature range from about 40°C to about 250°C.

15. (Rejected) A method of lowering the viscosity and improving the processability of a thermoplastic elastomer, the method comprising the step of:

blending from about 1 to about 99 wt% of the thermoplastic elastomer, which is a block copolymer having at least soft block and at least one hard block, from about 1

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to about 70 wt% of a phase change solvent having the general formula (I) – (V) of claim 1, or a mixture thereof, and from about 1 to about 70 wt% of a processing oil producing a glass transition temperature of greater than about 85°C for a polystyrene homopolymer to form an elastomeric composition;
wherein the shear viscosity of the elastomeric composition is lower than the shear viscosity of the thermoplastic elastomer when measured at 190°C and 1 sec⁻¹.

16. (Rejected) The method of claim 15 wherein the elastomeric composition has a shear viscosity of about 0.1 to about 3000 Pa·s at 190°C and 1 sec⁻¹.

17. (Rejected) The method of claim 15 further comprising blending one or more additional ingredient with the thermoplastic elastomer, the phase change solvent, and processing oil, wherein the additional ingredient is selected from the group consisting of :
from about 0.1 to about 50 wt% of a nucleating agent;
from about 1 to about 50 wt% of a thermoplastic polymer; and
mixtures thereof.

18. (Original) The method of Claim 15 wherein the processing oil has a molecular weight in the range of from about 500 to about 3000 g/mol

19. (Original) The method of Claim 15 wherein the processing oil comprises 50% of a mineral oil and 50% of a synthetic oil.

20. (Original) The method of Claim 19 wherein the synthetic oil is a poly (alpha olefin).

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EVIDENCE APPENDIX

Exhibit 1:

Interview Summary		Application No.	Applicant(s)	
		10/429,531	SMITH ET AL.	
		Examiner	Art Unit	
		Peter D. Mulcahy	1713	

All participants (applicant, applicant's representative, PTO personnel):

(1) Peter D. Mulcahy. (3) Mr. Krebs.

(2) Ms. McConihay. (4) Dr. Hamersky.

Date of Interview: 02 February 2006.

Type: a) ☐ Telephonic b) ☐ Video Conference
c) ☒ Personal (copy given to: 1) ☒ applicant 2) ☐ applicant's representative)

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.
If Yes, brief description: _____

Claim(s) discussed: All rejected.

Identification of prior art discussed: Fralzer and Knobel et al.


Agreement with respect to the claims f) ☒ was reached. g) ☐ was not reached. h) ☐ N/A.

Substance of interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Applicants amendments to the n number and phase change temperature would appear to obviate the art rejection over Knobel. The compounds of Fralzer are different from those claimed in the 1,2 attachment of the pendent groups. This attachment renders liquid compounds. The claims are limited to solid compounds.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.


Examiner's signature, if required

U.S. Patent and Trademark Office
PTOL-413 (Rev. 04-03)

Interview Summary

Paper No. 20060201

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Reply to Office Action mailed on 05/03/2006
Customer No. 27752

RELATED PROCEEDINGS APPENDIX

None.

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